

## **ENCLOSURE 2**

On December 3, 2004, USEPA notified the Indiana Department of Environmental Management that it intended to modify Indiana's recommendations for nonattainment designations under the eight hour ozone standard with respect to five counties. Indiana continues to believe that its original recommendations were consistent with the Clean Air Act and appropriate to reach compliance with the health standard in all areas of the state.

This document provides further information on these five counties. Indiana believes that evaluation of all the information presented should result in an attainment designation for Dearborn, Huntington and Vanderburgh Counties and in an attainment classification for Greene and Jackson Counties that reflects the fact that those counties are affected by overwhelming transport of regional air pollution.

<u>County</u>	<u>MSA</u>	<u>State Recommendation</u>	<u>EPA Proposal</u>
Dearborn	Cincinnati	Attainment	Nonattainment
Greene	N/A	Rural/Transport	Nonattainment
Huntington	Fort Wayne	Attainment	Nonattainment
Jackson	N/A	Rural/Transport	Nonattainment
Vanderburgh	Evansville	Attainment	Nonattainment

### **Dearborn County**

Counties within the CMSA	Proposed by EPA as Attainment	Proposed by EPA as Nonattainment
Dearborn, IN		<b>X</b>
Ohio, IN	<b>X</b>	
Boone, KY		<b>X</b>
Campbell, KY		<b>X</b>
Gallatin, KY	<b>X</b>	
Grant, KY	<b>X</b>	
Kenton, KY		<b>X</b>
Pendleton, KY	<b>X</b>	
Brown, OH	<b>X</b>	
Clermont, OH		<b>X</b>
Hamilton, OH		<b>X</b>
Warren, OH		<b>X</b>
Butler, OH		<b>X</b>

According to the December 3, 2003 letter, EPA intends to designate Dearborn County as nonattainment because it is within the presumptive nonattainment area and a power plant within the county accounts for a "significant" amount of the total NO<sub>x</sub> within the consolidated MSA (CMSA). Indiana has carefully reviewed the characteristics of Dearborn County and compared them to those of other upwind counties within MSAs that have been proposed by EPA to be designated either attainment or nonattainment

under the 8-hour ozone standard. Indiana believes that the following facts and information support an attainment designation for Dearborn County.

Additional Information for EPA's Consideration:

*Population and CMSA Boundary*

By presumptive boundary, IDEM assumes that EPA means the consolidated metropolitan statistical area (CMSA) boundary. If so, please note that there are five counties within the same presumptive boundary that EPA has proposed to be attainment. Therefore, it is not equitable to justify Dearborn County's inclusion on the basis that it is within the presumptive boundary. While Dearborn County has a slightly higher total population than the other five counties, Dearborn County still accounts for only 2.3% of the total population within the CMSA. The total population, population density, and percent of the CMSA total population for Dearborn County is very comparable to that of Brown County, Ohio, which is also within the CMSA, but proposed by EPA to be designated attainment. Additionally, in comparing Dearborn County's population statistics to that of Henderson County, Kentucky (upwind county within Evansville MSA, proposed to be designated attainment by EPA), the total population of Dearborn County is within 1,200 of Henderson County, but Henderson County accounts for 15% of the total population within its MSA, compared to only 2.3% for Dearborn County. A comparison may also be made to Pickaway County, Ohio (upwind county within Columbus, OH MSA, proposed by EPA to be designated attainment), which has a total population of nearly 53,000 (approximately 7,000 over Dearborn County) and accounts for 3.42% of the total population within its MSA (1.12% higher than Dearborn County).

*Emissions Characteristics*

EPA's December 3<sup>rd</sup> letter states that the majority of the NO<sub>x</sub> emissions in Dearborn County derive from a single power plant and that there is no indication that the facility intends to install control equipment at this time, "therefore there is not a compelling argument to exclude this county". Please note that the State of Indiana is in full compliance with the requirements associated with EPA's NO<sub>x</sub> SIP Call, and we anticipate that the facility in question will be in full compliance with Indiana's NO<sub>x</sub> rule. Nowhere in EPA's nonattainment boundary guidance (March 2000) or within the documents pertaining to the NO<sub>x</sub> SIP call is there an indication that a county should be considered by the state or EPA to be designated nonattainment based on how a facility within the county chooses to comply with the state's NO<sub>x</sub> rule. The designation of Dearborn County solely based on the presence of a power plant suggests that EPA should consider designating any county with a minimally controlled power plant within the SIP Call region as nonattainment, which is inconsistent with EPA's proposed actions.

Even though the above information should provide sufficient justification to support an attainment designation for Dearborn County, the power plant has in fact reduced its NO<sub>x</sub> emissions in recent years to comply with state and federal requirements. EPA used 1999 emissions data in its analysis. Based on 1999 emissions data, Dearborn County accounted for 16.6% of the total NO<sub>x</sub> emissions within the consolidated MSA (CMSA). Please note that this portion should not necessarily be construed as "significant" because it is unlikely

that NOx emissions from Dearborn County have a “significant” impact on ozone values elsewhere in the CMSA. The power plant (Tanners Creek) referenced in Dearborn County accounted for 14% of the total NOx emissions within the CMSA in 1999. However, American Electric Power (AEP) has substantially decreased NOx emissions at its Tanners Creek facility by installing permanent combustion controls to address requirements associated with Title IV and the NOx SIP Call. Contrary to EPA’s assertion, this facility has installed low-NOx burners on three of its four units, and over-fire air on the fourth, largest unit. From 1999 to 2003, annual NOx emissions from this facility have been reduced by over 20,000 tons (60% decrease). More importantly, NOx emissions during the ozone season have been reduced by over 8,900 tons (62.5%) by this facility. Once these reductions are applied to the 1999 inventory data, the power plant accounts for just over 6% of the total annual NOx emissions within the CMSA, and Dearborn County accounts for just 8% of the total NOx emissions within the CMSA.

Recent preliminary modeling conducted by the staff of the Lake Michigan Air Directors Consortium (referenced as Base Case E in Attachment I) has shown that the greater Cincinnati region is VOC limited, meaning that additional reductions in NOx (minor or relatively major) would likely have minimal to no impact in reducing ground level ozone concentrations within the Cincinnati CMSA. This means that VOC reductions are more likely the solution to decreasing ozone levels within the CMSA. Dearborn County accounts for just 3.4% of the CMSA’s total VOC emissions. This is a very insignificant contribution of VOC and it is relatively comparable to contributions from other counties within the CMSA that are proposed to be designated attainment (i.e. Brown County, OH). Nearly 73% of the CMSA’s total VOC derives from the four Ohio counties within the MSA that have been proposed by EPA to be part of the nonattainment area (Butler, Clermont, Hamilton, Warren). The following chart compares Dearborn County’s VOC emissions with those of other upwind MSA counties:

(Tons per Year)

<u>County</u>	<u>MSA</u>	<u>1999 VOC Emissions</u>	<u>% of CMSA/MSA</u>
Dearborn, IN	Cincinnati (OH)	3,746	3.4%
Henderson, KY	Evansville (IN)	4,763	16.8%
Pickaway, OH	Columbus (OH)	3,732	5%

Stationary (point) sources within Dearborn County account for just 0.9% of the total VOC emissions within the CMSA. Mobile source emissions in Dearborn County only account for 2.6% of the total emissions within the CMSA.

Since modeling conducted by EPA in support of the Heavy Duty Diesel Engine Standards and Ultra-Low Sulfur Diesel Fuel Rule and Clear Skies shows that the Cincinnati CMSA will attain the 8-hour ozone standard following the implementation of forthcoming programs (NOx SIP Call, Heavy Duty Diesel Engine/Ultra Low-Sulfur Diesel Fuel, Tier II Engine/Low Sulfur Gasoline, Etc.), the designation of Dearborn County as nonattainment would trigger unnecessary costly controls, resulting in illogical consequences.

Most importantly, it does not appear that Dearborn County significantly contributes to monitor violations within the CMSA. Additionally, the implementation of control measures in Dearborn County will not aid in addressing monitored violations elsewhere within the CMSA.

### **Huntington County**

Counties within the CMSA	Proposed by EPA as Attainment	Proposed by EPA as Nonattainment
Adams	X	
Allen		X
Dekalb	X	
Huntington		X
Whitly	X	
Wells	X	

According to the December 3, 2003 letter, EPA intends to designate Huntington County as nonattainment because it is within the presumptive nonattainment area, Allen County accounts for 64% of the total population and 55% of the emissions within the Metropolitan Statistical Area (MSA), Huntington County had a monitored violation of the standard based on 2000-2002 data, and emissions and potential growth could be affecting monitor values in Allen County. Indiana has carefully reviewed the characteristics of Huntington County and compared them to those of other upwind counties within MSAs that have been proposed by EPA to be designated either attainment or nonattainment under the 8-hour ozone standard. Indiana believes that the following facts and information support an attainment designation for Huntington County.

#### **Additional Information for EPA's Consideration:**

##### *Population and CMSA Boundary*

Once again, by presumptive boundary, it is assumed that EPA means the MSA boundary. If so, please note that there are four counties within the same presumptive boundary that EPA has proposed to be attainment. Therefore, it is not equitable to justify Huntington County's inclusion on the basis that it is within the presumptive boundary<sup>1</sup>. The six-

---

<sup>1</sup> We also note that Huntington County is no longer part of the Fort Wayne MSA, as that boundary was redefined after the 2000 Census. The fact that EPA is basing nonattainment decisions on now superceded MSA boundaries raises further doubts about the appropriateness of using these boundaries as a primary criterion for analysis.

county Fort Wayne MSA covers a vast amount of land. Although Allen County itself may only account for 66.1% of the total population within the MSA, Huntington County only accounts for 7.6% of the total population within the MSA. The total population and population density of Huntington County are very comparable to the other four counties that surround Allen County. In fact, DeKalb County is more populous than Huntington County. In comparing Huntington County to an upwind county within an MSA of similar size that EPA has proposed as attainment, Huntington County has 15,000 fewer residents than Henderson County, Kentucky which accounts for 15.1% of the population within its MSA. Furthermore, Huntington County and Peach County, Georgia (upwind county within the Macon, GA MSA) both account for just 7.6% of their respective MSA's total population. Both Peach County in Georgia and Henderson County in Kentucky have been proposed as attainment by EPA.

The Fort Wayne MSA is unique in that the urban area is confined to one-third of Allen County and is not projected to grow beyond its planning boundaries (refer to land use control discussion submitted in conjunction with IDEM's October 7, 2003 letter). Unlike many MSAs (e.g., South Bend, IN), the Fort Wayne MSA's population density is very sparse in areas outside the urban area. Additionally, because the total population of five fairly rural counties are combined and compared with Allen County's population, the percentages of the total population are skewed, particularly that of Allen County. MSA boundaries in many instances are rather arbitrary. For example, the South Bend, Indiana MSA only includes St. Joseph County. However, urban development, population density of neighboring counties (Cass County, MI and Marshall County, IN), and regional characteristics imply that nearby counties could easily be within the MSA, but are not. Just because Huntington County was linked to the Fort Wayne MSA in 1999, even though it no longer is, EPA should not place so much reliance on what appears to be an arbitrary and outdated boundary.

EPA also expresses concern over the potential for growth in Huntington County. However, Huntington County experienced an average growth rate of 3% from 1990 to 2000. This is an average growth rate at best compared to similar counties both in Indiana and nationwide. Within the Fort Wayne MSA, Huntington County has the lowest growth rate. Following the 2000 Census, the Office of Management and Budget excluded Huntington County from the Fort Wayne MSA. From 2000 to 2002, Huntington County's growth rate was less than 1%.

#### *Emissions Characteristics*

EPA's December 3<sup>rd</sup> letter states that Huntington County is upwind of the county with a violating monitor (Allen) and has "some emissions". However, every county in the United States has "some emissions". Huntington County's 4,400 annual tons of VOC (roughly 10% of the total VOC within the MSA), and 3,700 tons of NO<sub>x</sub> (roughly 8% of the total NO<sub>x</sub> within the MSA) are not significant. Although emissions from Huntington County may contribute to monitor values in Allen County, it is unlikely that the emissions from Huntington County contribute any more to the values in Allen County than emissions deriving from other Indiana counties, or from counties outside Indiana's borders. In comparing Huntington County with Henderson County, Kentucky (an upwind

county proposed by EPA to be attainment, though within an MSA that has a downwind monitor slightly above the standard), Huntington County has over 4,600 fewer tons of NOx emitted annually, and nearly 300 fewer tons of VOC emitted annually.

#### *Monitoring Data*

An ozone monitor has been located in Huntington County for just four ozone seasons. The 2000-2002 data set represents the first three years of data available from this site. The data set has a three-year average fourth high value minimally above the standard at 0.086. The current value from 2001 through 2003 is under the standard. According to EPA's guidance, state recommendations and EPA's actions should be based on the three most recent years of quality assured monitoring data. Unfortunately, due to the fact that only four years of data are available, an assessment of monitoring trends cannot be done at this time. However, since sources are to be fully compliant with the state NOx rule in the spring of 2004, we are confident that the design value for the Huntington monitor will remain below the standard.

#### *Modeling*

According to EPA modeling conducted to support the NOx SIP Call, the Heavy Duty Diesel Engine Standards and Ultra-Low Sulfur Diesel Fuel Rule, and Clear Skies, Allen will easily attain the health standard within three years. Since it appears that the surrounding counties, including Huntington, do not appear to significantly contribute to the current monitor values in Allen County, and Allen County monitor values are just above the standard but will easily comply with the standard within a few years, a nonattainment designation for Huntington County is not justified.

### **Southwest Indiana**

Counties within the CMSA	Proposed by EPA as Attainment	Proposed by EPA as Nonattainment
Henderson County, KY	<b>X</b>	
Posey County, IN	<b>X</b>	
Vanderburgh County, IN		<b>X</b>
Warrick County, IN		<b>X</b>

Indiana has carefully reviewed EPA's justification concerning a nonattainment designation for Vanderburgh County. However, Indiana believes that the following facts and information support an attainment designation for Vanderburgh County.

As with Henderson County, Kentucky and Posey County, Indiana, based on recent monitoring data, Vanderburgh County attains the standard. Vanderburgh is the core county within the Evansville MSA, thus it is the most populous. However, since the prevailing wind pattern for the area is from the southwest-south-southeast (reference wind rose plots submitted in support of IDEM's October 7, 2003 letter), and Warrick County is due east of Vanderburgh County, it cannot be concluded that Vanderburgh

County is upwind of and contributing to monitor values in Warrick County. Additionally, the modeling conducted by EPA for the NOx SIP Call, the Heavy-Duty Diesel Rule, and Clear Skies Act all predict that ozone values in the Evansville Region will decrease by 10-12 ppb following full implementation of the SIP Call. This indicates that, not only are additional NOx or VOC reductions unnecessary, ozone values within the Evansville Region are responsive to reductions in NOx. Therefore, the VOC emissions from Vanderburgh County referenced by EPA as being significant, are actually irrelevant in terms of the region attaining the health standard.

The Yankeetown monitor in Warrick County is the only monitor within the Evansville MSA with a current value above the standard. That value is 0.085, the lowest value to be considered representative of nonattainment (within 0.01 parts per billion from attaining the standard). EPA and LADCO modeling has shown that the Evansville MSA will attain the standard within three years of the implementation of the NOx SIP Call (2007). Monitoring trends show that the Evansville MSA will likely attain the standard as soon as the close of the 2004 ozone season. This is evident by the continual decrease in monitoring values over the past several years. Therefore, a nonattainment designation for Vanderburgh County is not justified. Furthermore, if new source review requirements are to apply in Warrick County for years following a designation, it does not make sense for Warrick County to be designated nonattainment either.

### **Greene and Jackson Counties**

Although Indiana understands EPA's reasoning for designating Greene and Jackson Counties as nonattainment, we believe that the following facts and information support Greene and Jackson Counties being treated as areas affected by overwhelming transport:

As Indiana argued in its July 15, 2003 submittal, we strongly feel that Greene and Jackson Counties are rural and should be recognized as such by being classified as rural areas affected by overwhelming transport. Indiana urges EPA to treat rural counties based on the specific characteristics of the county and place far less focus on whether the county abuts a county that is within a Metropolitan Statistical Area (MSA). There are several rural counties in Indiana that are many miles from a metropolitan area, and are rural in every nature, but would be excluded from being treated as rural by EPA simply because they abut an MSA. Additionally, there are a number of Indiana Counties that are part of an MSA, but have no metropolitan characteristics whatsoever. Once again, MSA boundaries are often arbitrary in nature.

Greene and Jackson Counties are not responsible for, nor do they contribute significantly to, the high ozone values within the counties or downwind air quality. There are no major sources within Greene or Jackson Counties that could be controlled to improve air quality within the counties and both counties have low population. IDEM believes EPA should recognize that these counties are affected by overwhelming transport and designate them in a fashion that does not result in the imposition of economic constraints that will not improve air quality.

*Note: Indiana is not advocating that counties such as Henderson County, Kentucky or Pickaway and Brown Counties, Ohio be designated nonattainment. We are simply encouraging EPA to maintain consistency in the designation process by designating Dearborn and Huntington Counties attainment.*